West National Technology Support Center

FY2008 Report

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Portland, OR 97232

A Message from the Director

The West NTSC opened for business at the start of Fiscal Year 2005 which makes this our 4th annual report. In those four years, I believe we have served our customers well through training, direct assistance, coordination of multi-State efforts, and technology development. We very much appreciate the positive feedback we receive from our customers. And, although our lines of service are not as broad as we would like (for example, we can not offer support on GIS), we have been able to provide assistance for almost every State request we receive.

In this report are statistics on assistance requests as well as some 4-year comparisons. This information shows that we have been keeping up with the workload and that the distribution of requests between the States has also remained steady through the years.

Our challenges for the coming year are the same as for the rest of the Agency – replacing specialists as retirements occur, providing support for new Farm Bill programs, and adapting to new financial accountability requirements. One area where we are looking forward to working with our State partners is building a new corporate business model that will better support conservation planning along with improved financial processing.

Finally, we want to insure we are communicating with you to meet your needs. Please let us know what we can do to better serve you. Thank you for your support in 2008. We look forward to working with you further in 2009.

- Bruce Newton

http://www.nrcs.usda.gov/about/ntsc/west/index.html

CORE TEAM

The West National Technology Support Center (WNTSC) Core Team consists of seventeen specialists whose primary function is providing direct assistance and technology transfer to the Western States. Although specialists from the three National Technology Development Teams may also provide direct assistance to States, their primary function is developing new tools.

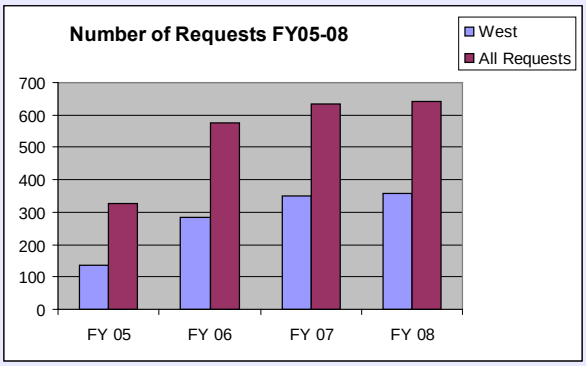
Core Team specialists provided assistance through over 250 formal requests for assistance in FY08. They also provided training on using various planning tools, accessing soils data, developing state standards and specifications, and implementing conservation practices. This report highlights a few examples of the diverse assistance provided by the WNTSC Core Team.

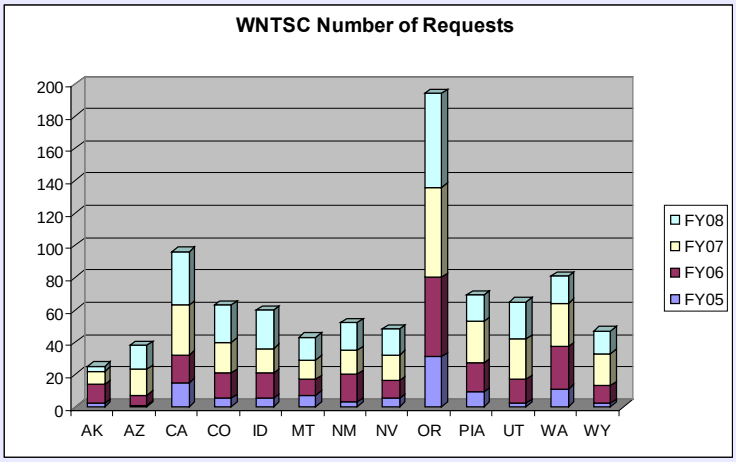
Helping People Help the Land

REQUESTS
FY08 All WNTSC Employees

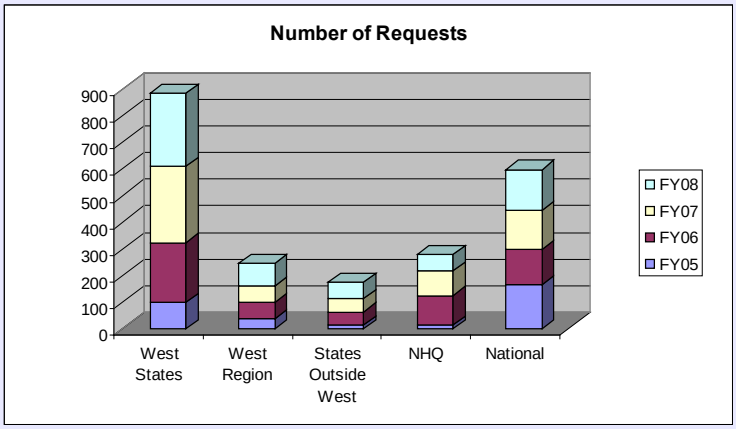
Requests	In Progress	Ongoing	Completed
640	154	49	637

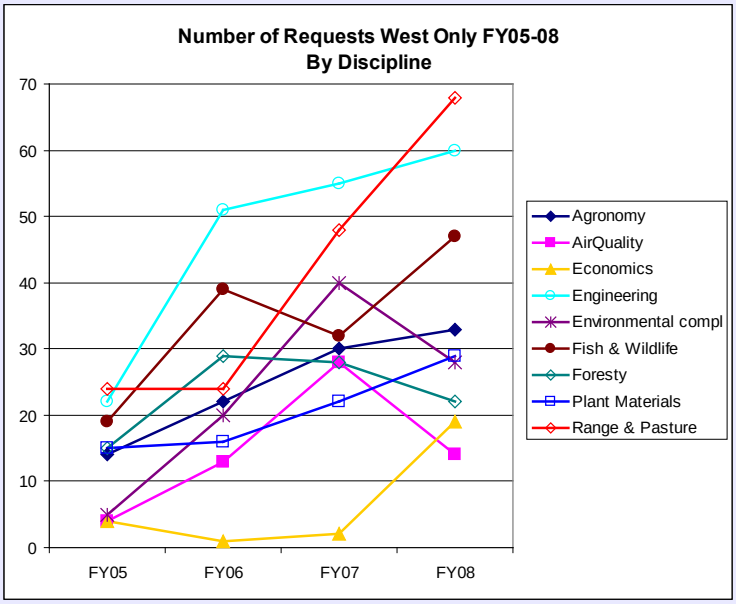
"All" includes both Core and Development Teams - Energy, Air Quality and Atmospheric Change, and Water Quality and Quantity





West States = Requests from Individual West State
West Region = Requests benefit multiple West States
National = Assistance benefts States across the US
NHQ = Request supports NHQ staff work





Requests are those assistance projects that require more than 2 days of staff time and are recorded in the Assistance Tracker database. Team Members track and record the time spent on projects. For more information on projects, you may log into our Assistance Tracker System to see the projects and results; http://ssiapps.sc.egov.usda.gov/RequestTracker/Default.aspx. Please contact your West NTSC specialist or Kathleen Dobler, National Technology Specialist, at 503-273-2429 for further assistance.

12/3/08

The San Rafael riverine habitat once supported large numbers of fannelmouth sucker, roundtail cub, and bluehead sucker populations, now considered species of special concern in one or all of the states of UT, NV, CO, NM, AZ, and WY. They signed a Rangewide Conservation Agreement to foster collaboration on recovery efforts for the 3 species. Boyer facilitated the establishment of a CEAP-supported project monitoring effort with Utah State University to evaluate the effectiveness of the conservation actions to improve river corridor habitats.

A strong partnership has formed to address stressors, and restoring the riverine and riparian functions and the species that depend on them. The price tag for such an effort is high, providing an excellent opportunity for leveraging funds, technical expertise, and collaboration. To date, UDWR, USU/USGS, BLM, BOR and NRCS have already collectively committed personnel time and implementation dollars in excess of $1,000,000 towards conservation planning, tamarisk removal/riparian restoration, and fsh population, distribution, and movement studies on the San Rafael River and its foodplain. Biologists with the UDWR predict that if restoration efforts go as planned, an additional 50 river miles of key habitats for native fsh, especially those currently managed under the multi-state, three-species agreement, will be available.

Technology Transfer and Training

NRCS conservation professionals use many tools in developing alternative conservation plans for farmers and ranchers to install best management practices on their land. Designing a practice to meet the needs of that particular land site can also require specifc tools. WNTSC discipline specialists assist in developing and testing new software tools and, most importantly, provide training on those tools to NRCS feld offce conservationists, partners, and technical service providers in our West Region and across the United States.

West NTSC Training Site Available

One of the major tasks of the WNTSC conservation professionals is providing technology transfer/training on new technology to NRCS employees in the West Region States as well as partners, technical service providers, and other NRCS employees throughout the US. To better facilitate that training, WNTSC national technology specialist **John Copeland** has added a WNTSC Training Site to theWNTSC Internet SharePoint. You can reach that site at https://nrcs.sc.egov.usda.gov/st/wntsc/training/default.aspx.

The Training Site is accessible by all NRCS employees. It contains lists of a variety of workshops

greeted and welcomed the assembled group that also included National Biologist **Terrell Erickson**, National Wildlife Team Leader **Steve Brady**, WNTSC Fisheries Biologist **Kathryn Boyer**, WNTSC Ecologist **Meg Bishop**, and WNTSC Wildlife Biologist **Wendell Gilgert**.

ESD classroom training was provided by **Jeff Repp**, WNTSC Rangeland Management Specialist. Quality feld training was provided by **Brendan Brazee**, State Rangeland Management specialist and **Bob Logar**, Montana State Forester, during an all-day feld trip with stops at rangeland, forest, and riparian sites. After the feld exercises, a discussion was held focusing on habitat elements that are currently measured during ESD information collection to determine which elements are missing. Recommendations from that discussion will be forwarded to **George Peacock**, Rangeland National Technology Development Team Leader to be considered for inclusion in the ESD template.

NRCS Training on Engineering Field Tools and Survey Engineering Tools Software

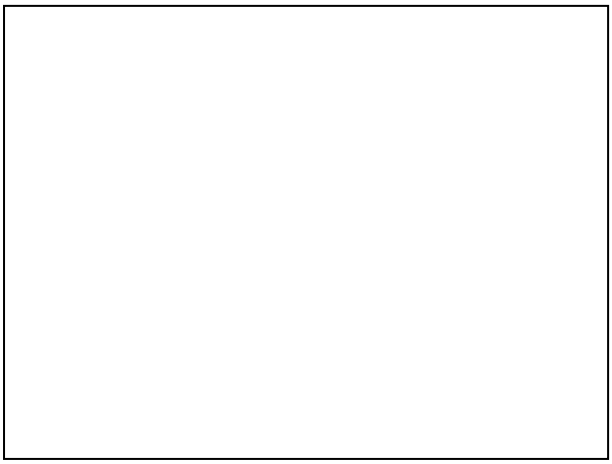
The Engineering Field Tools (EFT) framework provides a simple, fexible, and easily maintainable system that will be used by the NRCS Conservation Engineering Division to deliver engineering specifc applications quickly to target users. The EFT framework is installed on a workstation to provide basic functionality then is extended by retrieving specifc tool plugins from the National EFT Update Center. The plugins add functionality to the existing system.

Kip Yasumiishi, civil engineer on the WNTSC Core Team, developed and delivered training to 86 NRCS employees from across the US on the EFT and Survey Engineering Tool (SET), the frst tool available for the EFT platform. SET is a simplifed surveying software program for contour development, plotting, and design. This platform release of SET adds many new features that were not available in the previous stand-alone version.

A Waterways Design Tool is under development for the EFT platform and will be followed by a Terrace Design Tool. The training video/audio can be downloaded from: http://www.itc.nrcs.usda.gov/eft/web/eft/training/.

WNTSC Grazing Specialist Part of Workshop Efforts in Mongolia

WNTSC grazing specialist **Pat Shaver**, as part of the Interagency Rangeland Health Team, received an invitation from the Inner Mongolia Agriculture University in Hohhot, Inner Mongolia, China to provide a workshop featuring ecological sites and rangeland health in Dalinour, Inner Mongolia. The approximately 30 attendees from China, Germany, Japan, Mongolia, United States, and Uganda spent the week identifying ecological sites and assessing those sites using the "Interpreting Indicators of Rangeland Health" protocols. After the workshop and a 10-hour train ride across Inner Mongolia, Shaver attended the VIII International Rangeland Congress in Hohhot and presented a poster on ecological sites and rangeland health. Approximately 1200 delegates from around the world attended this joint IRC, IGC congress. Shaver also presented a seminar to the rangeland ecology graduate students at the University.



Shaver talks to graduate students at the Inner Mongolia Agriculture University Hohhot, Inner Mongolia, China.

Other Developments

Pollinator Conservation Specialist for NRCS

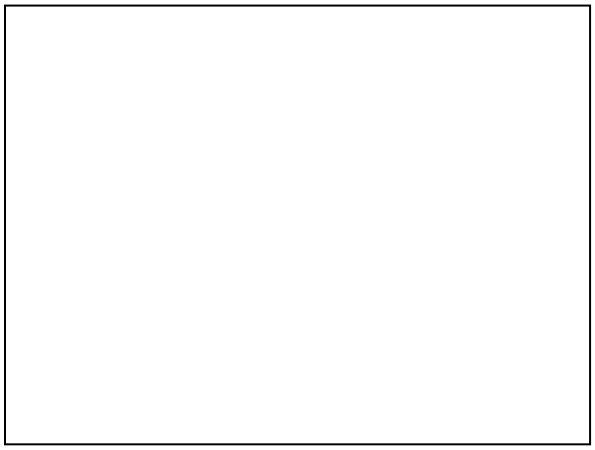
Thanks to the joint efforts of **Bruce Newton**, WNTSC Director; **Wendell Gilgert**, WNTSC Wildlife Biologist; **Doug Holly**, National Pollinator Specialist; **Terrell Erickson**, National Biologist; **Mike Hubbs**, Director of the Ecological Science Division; and **Bill Puckett**, Deputy Chief for Science and Technology; a contribution agreement has been signed by NRCS and the Xerces Society for Invertebrate Conservation to cooperatively fund a Joint Pollinator Conservation Specialist position for the next two years. **Mace Vaughn** will serve in that position.

The agreement formalizes work that the Xerces Society and Mace have been doing with NRCS over the past several years. He will be available to provide native pollinator habitat management training to NRCS feld conservationists, workshops with districts and landowners, and help develop computer-based training and technical notes that

Core Team continued

will include habitat management and plant materials recommendations to states.

Vaughn will work our to the West NTSC office and can be reached at the (503) 273-2442 or mace.vaugh@por.usda.gov to schedule visits and assistance to your State.



Mace Vaughn and his best friend Lucy

Forestry Futuring in NRCS

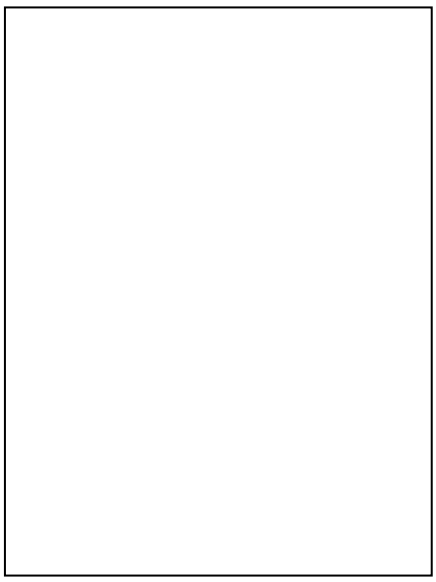
The recently signed Memorandum of Understanding on Private Forestry Assistance between the National Association of State Foresters (NASF), National Association of Conservation Districts (NACD), USDA Natural Resources Conservation Service (NRCS), and the USDA Forest Service, as well as the Food, Conservation, and Energy Act of 2008 (2008 Farm Bill), have renewed emphasis on conserving our nation's private forests. Taking advantage of this opportunity, NRCS Chief **Arlen Lancaster** initiated a National Forestry Futuring Team (FFT) that met September 16-18, 2008 in Arlington, Virginia to develop a guide for defning the Agency's role in efficiently and effectively delivering technical assistance to meet future forestry needs with increased support from partners.

The FFT Team was made up of all levels of NRCS employees with input from the three key partner organizations -- NACD, NASF, and the Forest Service. The NRCS West Region was represented by **Kenneth Alcon**, New Mexico Area Range Management Specialist; **Jerry Reioux**, California State Staff Forester; **Bart Lawrence**, Pacifc Islands Area Assistant Director for Field Operations; and **Lyn Townsend**, WNTSC Forester. Other members of the FFT included: **Andy Mason**, National Forester; **Janet Oertly**, South Dakota State Conservationist; **Barb McWhorter**, West Virginia State Staff Forester; **Matt Feno**, District Conservationist (Carthage, TX); **Michelle Lohstroh**, Ohio ASTC (and FFT facilitator); **Mary Thompson**, Maine Resource Conservationist; **James Tillman**, Georgia State Conservationist; **Bruce Wight**, National Agroforester; **Doug Wallace**, Missouri State Staff Forester; and **Curtis Talbot**, Range Management Specialist from the National Soil Survey Center.

"With the forestry emphasis of the new Farm Bill and the support of the new MOU, the West Region States are in great shape for working at the state level to renew MOU's with partners and set up functional relationships. These efforts will help increase conservation forestry assistance to the over 1 million private forest owners in the 13 Western States," said Townsend.

Added Kenneth Alcon, "With flexibility at the local level, we can find the right mix of planners from NRCS and partners to meet both the landowner's objectives as well as the Agency's mission."

The draft report will be reviewed by the NRCS National Forestry Consortium at the NRCS National Forestry Meeting on November 4-5, 2008 in Reno, Nevada. The Forestry Futuring Team final report will be available in January 2009.



Members of the Forestry Futuring Team discuss a focus and goals for conserving our nation's private forests.

NATIONAL TECHNOLOGY DEVELOPMENT TEAM ACTIVITIES

The West NTSC houses three National Technology Development Teams. These Teams are responsible for developing new technology in specifc issue areas that represent current or emerging conservation priorities for the Agency. Highlights for each of the three Teams follow.

Air Quality and Atmospheric Change Team:

The Air Quality and Atmospheric Change Team (AQAC) provided expert assistance in the development and formation of the USDA Climate Change Research Strategic Plan. **Roel Vining** participated in this effort to lay out the future of USDA in addressing climate change including assessing the impacts of climate change on agriculture, identifying how agriculture can adapt to climate change, what can be done through agriculture to mitigate climate change, and what knowledge and tools will be needed to educate agriculturalists and the American public on climate change and agriculture. In addition to providing expert assistance, Vining was actively involved in writing two chapters of the Plan--Goal 3, Mitigation, and Goal 4, Decision Support.

The AQAC Team also provided fve new Air Quality fact sheets for distribution to and use by the states. **Greg Zwicke** coordinated the development of the fact sheets to provide background information for NRCS employees, partners, and others to better understand these air quality resource issues relating to livestock. The fve fact sheets are:

Air Quality and Livestock Operations
Particulate Matter and Animal Operations
Ozone Precursors and Animal Operations
Odors and Animal Operations
Greenhouse Gases and Animal Operations

Several states have adapted these fact sheets for use in their states and the AQAC Team is in the process of developing several other fact sheets covering a wide range of agricultural air quality topics.

Susan O'Neill has been working with several groups on prescribed burning and smoke prediction. O'Neill was the lead author for the new chapter "Regional Real-Time Smoke Prediction Systems" in the book "Wildland Fires and Air Pollution Volume 8," a well-accepted, internationally-used publication The chapter profles four smoke prediction systems that are currently operational for regional domains for North America and Australia, providing forecasts to a well-developed user community. The systems link fre activity data, fuels information, and consumption and emissions models, with weather forecasts and dispersion models to produce a prediction of smoke concentrations from prescribed fres, wildfres, or agricultural fres across a region. These real-time smoke prediction systems are providing a point of interagency understanding between land managers and air regulators from which they can negotiate the conficting needs of ecological fre use while minimizing air quality health impacts.

The AQAC Team has been very active in training development over the past year. Led by **Greg Johnson**, Team Leader, the Team developed four new air quality / atmospheric change web-based courses that will soon be available in AgLearn. The frst course is an introductory overview entitled "Air Quality, Climate Change and Energy," and was developed in cooperation with the Energy National Technology and Development Team. It will be a prerequisite for NRCS Bootcamp. The other courses are intended for State Air Quality Contacts as well as others in the Agency (and partners) who have responsibilities in the air resource arena and/or provide information about air quality and atmospheric change in relationship to conservation planning and programs. The courses are titled: "Why Should We Care About Air Quality?", "Air Quality Resource Concerns", and "Greenhouse Gases and Carbon Sequestration."

The AQAC Team is also planning an additional online course, "Animal Production and Air Quality," The fve on-line courses (with more possible in the future) complement a full curriculum plan now being implemented for air quality and energy. In-class training has recently been given to NRCS state and feld staffs in Colorado, Pennsylvania, and Oregon, with additional training in New England, California, and other areas planned for the coming year.

Energy Team:

The primary focus of the Energy Technology Development Team in FY08 was training. The Team worked closely with NEDC, the Air Quality and Atmospheric Change Team and the National Climate Change Leader to develop a series of web-based courses that will be delivered through AgLearn. The Air Quality, Climate Change and Energy (ACE) course will be the first course in the series to become available in AgLearn. This course is intended to provide an overview of ACE and will be a prerequisite for Boot Camp. It is undergoing final reviews before deployment. Other energy courses in the web-based curriculum are scheduled for completion before the end of calendar year 2008 include, "Why Do We Care about Energy?" and "Energy Basics."

The Energy and AQAC Teams also worked together to deliver state-level "Energy and Air" training in both Pennsylvania and Oregon. The Energy Team continues to facilitate communication among the State Energy Contacts with regularly scheduled web meetings on a variety of energy-related topics.

Water Quality And Quantity Team:

Developing technology tools to assist NRCS conservation professionals in the planning process is an integral part of the Water Quality and Quantity Team's (WQQT) activities and FY08 was no exception. In some cases existing tools were updated or improved and in other cases, new tools were developed.

After much work, a new version of Win-PST went out to the field in September. The pesticide environmental risk screening tool evaluates pesticides in terms of aquatic and human health. The improved software provides a pesticide database that is synchronized with EPA incorporating new pesticides and active ingredients and includes an expanded database of pesticide properties. Users have been very happy with the interface changes. The Nitrogen Trading Tool was expanded to include phosphorus and spatial connectivity to the Web Soil Survey. As an offshoot of the NTT, a user tool was developed to extract 20+ years of climate data from latitude/longitude input. This information is critical for watershed planning and modeling.

The Team also expanded the Manure Management Planner Tool (MMP) for use around the country. MMP is currently used in 7 States. It has geospatial attribute capability with the Geospatial Nutrient Tool. The Team has also been participating in NHQ work on developing new Farm Bill program guidelines. They have already provided leadership and technical expertise in the development and programming of new tools for the Conservation Stewardship Program (CStP). One of the primary tools is the CStP Eligibility Tool for producers and NRCS conservation professionals to use in assessing the land and choosing enhancements. These tools are being produced along with policy and are making their way through the Farm Bill development process.

The WQQT also provided technical assistance to producers and States as well as provided training to NRCS employees and partners. Over 40 training sessions were delivered across the United States. In Kansas, the Team participated in the Cheney Lake CEAP Assessment with on-site bank recession measurements and calculations. Ten States with river restoration projects were assisted during the year. Additionally, four tribes were provided with assistance.

The WQQT looks forward to continuing these efforts and more in the coming year.